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Canada as a non-nuclear power.



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CANADA AS A NON-NUCLEAR POWER *

by

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The problem of the spread of nuclear weapons--the "Nth country problem"--has been the subject of much consideration and consternation in the last decade and a half. Most of the analysis has centered on the incentives for a smaller power to join the nuclear club and the possibility that it will be able to do so. The opposite consideration--the psychological and material incentives for it to remain a non-nuclear power--has received a much smaller amount of specific attention.

The case of Canada is significant in this respect. For, as Leonard Beaton and John Maddox have pointed out in their important study of the Nth country problem, "Alone among the nations up to the present, she has had the undoubted capacity to produce atomic bombs and has chosen not to do so." ¹

Nuclear weapons can be diffused in two ways: through independent manufacture or through international cooperation. Canada has remained a non-nuclear country despite temptations in both of these categories. Her experiences on the two possible nuclear paths will be analyzed here, and then the particularities and the generalities of the Canadian case will be assessed.

PART I. Diffusion through independent manufacture:

Canada's atomic program

Canada is in the best position of any of the non-nuclear powers to develop atomic weapons independently. She has extensive uranium resources within her borders, abundant sources of cheap hydroelectric power, an acknowledged ability to build highly respectable aircraft and air engines, and a good quantity of scientists and technicians with the required knowledge of atomic science and the necessary skills to put it in practice. ² Finally, she has open areas to serve as weapons test sites. Even France, in the estimation of Beaton and Maddox, has not been in as good a position to embark on a nuclear weapons program. ³

Cooperation on the bomb

Canada has been involved in atomic research since World War II. Coordination of British and United States efforts in this area began in October 1941 and Canada's cooperation was requested in June of the following year. ⁴ The Canadians were soon providing raw materials, facilities, laboratory sites, money, and manpower. In 1942, the British established in Montreal a large research laboratory, involving many Canadian scientists, for the investigation of the controlled release of atomic power. In August 1943, a Combined Policy Committee to plan the cooperation of the three countries was set up. And in 1944, construction was begun, as a joint effort, on a uranium and heavy water power plant at Chalk River near Ottawa. ⁵

The testimony in 1949 of Dr. Robert F. Bacher, a Los Alamos scientist and AEC Commissioner, emphasized the extent of this three power collaboration: ⁶

... the cooperation with the British and Canadians during the war was quite complete. It did not cover all parts of the project, but many parts of the project it covered with considerable thoroughness.... The Canadians in particular were closely associated with the development of the piles at the metallurgical laboratory in Chicago. The extent of the knowledge which was exchanged during that period of cooperation between the British and Canadians with the United States was very deep.

In 1946, with the passage of the United States Atomic Energy Act, the British and Canadian participation was, as Dr. Bacher puts it, "cut to zero." ⁷ But, by this time the small low-power atomic energy pile at Chalk River was in operation and the Canadians, like the British, found themselves with the necessary materials, skills, and manpower for an atomic weapon program of their own. Unlike Great Britain, however, Canada did not embark on such a program.

The Canadian nuclear "decision"

Beaton and Maddox assert that Canada rejected a nuclear weapons policy "in 1946 by a deliberate and conscious decision."⁸ But to call Canada's arrival at a non-nuclear policy a "decision," let alone a "deliberate and conscious" one, appears to be overly imaginative. It seems rather that a nuclear policy was never even thought of.

An analysis of the histories and periodicals of the time, of the atomic energy debates, and of the biographies of Prime Minister Mackenzie King leads to the conclusion that there was

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The Canadian Nuclear Program

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of the atomic energy debate and on the development of the
Canadian nuclear program leads to the conclusion that there was

never any serious consideration of the pros and cons of developing an atomic weapons program. In all this literature, the word, "decision," is used only twice and there only in a general way, referring to the policy arrived at, not the procedure for making it.⁹

This conclusion is supported by J. W. Pickersgill, an assistant to and biographer of Mackenzie King and a Liberal minister and MP, who has been called, "the most powerful backstage figure in Ottawa" from 1937 to 1953.¹⁰ He states:¹¹

...there were never any serious proponents of the view that Canada should develop its own atomic force. Certainly Mr. King had no such view.

No general pronouncement that the military policy of Canada was non-nuclear was ever even made. But that this was the policy was admitted in an offhand manner in the middle of a House of Commons debate in June of 1946. (This may be the date to which Beaton and Maddox refer.) C. D. Howe, the Minister of Reconstruction and Supply, was asked if there would be a representative of the defense forces on the proposed Canadian Atomic Energy Control Board. His complete reply was:¹²

Canada is not concerned with the use of atomic energy for making weapons. The development of defense weapons is closely interlocked with the national research council, and I think the contact there would be sufficient. But it is not the intention, as far as Canada is concerned, to develop atomic energy for the manufacture of weapons. Therefore I doubt whether a member of the defense forces would logically be a member of the board. However, that has not been finally determined.

It might be suspected nevertheless that Canada felt herself to be in an "option" position--that is, she intended to proceed with nuclear research and reactor construction so that she would

be in a convenient position to become a nuclear power in the future should she feel the need.

There is no evidence that this was in the backs of the minds of the officials. Only once in the lengthy debates over the Atomic Energy Control Board was such a suggestion ever made. J. H. Blackmore, a Social Credit MP, questioned Howe rather persistently on this point. Blackmore's concern was that, as in the first years of World War II, Canada might find herself in a war while the United States remained neutral and isolationist with its atomic monopoly. Howe insisted in reply that, "having the explosive material which we make in Canada, our ordnance people could make a bomb of their own." Thus Canada was in no sense "subservient to the United States" in this regard as Blackmore feared. For, Howe asserted, "I do not think it is particularly difficult to make a bomb, and I do not think it is necessary for us to have knowledge of how the United States make their bomb in order to do so." After Howe had proclaimed this twice, Blackmore said, "I feel reassured," and dropped the line of questioning. ¹³

It would be wrong to take Blackmore as typical. He was on the extreme right wing of respectable Canadian politics and was later to be the only admirer of Senator McCarthy in the House of Commons. ¹⁴ And even his questions arose from a fear of subservience to the United States rather than from a desire to see Canada a great power.

Britain and Canada--a question of image

At this same time Great Britain was proceeding actively and openly on her own nuclear weapons program. Yet the Canadian

and British situations in world affairs were in many respects similar: neither had NATO-type nuclear allies, neither were under a de facto nuclear umbrella, neither had any perceived enemy against which it was necessary to arm, both were essentially invulnerable to any potential enemy, and both were physically and financially able to launch a nuclear weapons program.

To an extent Canada felt herself already to be an atomic power. And, if the possession of reactors is used as the criterion, it is true that only the US and Canada were atomic powers at this time. Even the British, who had essentially built the Canadian reactor, were on occasion slighted. As Howe put it, "...we have the industrial know-how. This at present is confined to two countries, the United States and ourselves." When someone suggested that the United Kingdom also might have such knowledge, Howe was willing to grant that, "while the United Kingdom has not yet built a plant, I have reason to believe that that country has the knowledge that will enable it to do so." 15

The fact that in some sense Canada may have felt herself already to be an atomic power, however, does not explain the difference between the Canadian and British cases. For surely, despite the lamentable absence of reactors on British soil, the United Kingdom undoubtedly felt herself to be actual or potential atomic power. At any rate, she didn't stop at the reactor stage, but instead went on to weapons development.

How can this policy difference be explained then? Why did the British pursue a nuclear policy while the Canadians

didn't even consider the idea seriously? An important part of the answer can be found in the two countries' self-image. The British considered themselves to be a "great" power; Canada saw herself as a "middle" power. A modern great power has among its attributes the possession of atomic weapons while a middle power operates by careful application of informal, moral, and non-military persuasion. A great power acts; a middle power influences.

At the present time, the only powers which are engaged in a nuclear weapons program--the US, the USSR, Great Britain, France, and China--are also among those which generally regard themselves to be great powers. The only other countries which might be placed in this category are Germany and Japan (and possibly India). Thus while in the future a self-admitted lesser power may adopt nuclear weapons to confront a specific enemy challenge or to further its effectiveness as an armed neutral, only the self-estimated "great" powers are now pursuing such a policy.

In Canada's case, the self-imposed appellation, "middle power," is not one of modest restraint, but almost one of arrogant grandeur. For Canada, despite the space it takes up on a Mercator projection map, is a small power. Its 1960 population was 17,814,000. This is one-tenth the size of the United States, one-third the size of Great Britain or West Germany, two-fifths the size of Italy or France, and half the size of Nigeria or Mexico. Nor is it a giant economically--its gross national product is even less than one-tenth that of the United States.

The Canadian atomic program since the war

Left with a reactor and with considerable experience in nuclear theory and technology after World War II, the Canadians continued a modest, but sound, non-military atomic program. The Atomic Energy Control Board of Canada was set up in late 1946 to control research, mining, and industrial application of the atom and to coordinate these efforts with the atomic energy commissions of the United States and the United Nations.

A new nuclear reactor, the NRX, was built at Chalk River and began operation in the summer of 1947--a short time before Britain's GLEEP low power reactor was completed. The NRX has provided radioactive isotopes for research and has been used especially to study the use of heavy water as a means of carrying heat away from atomic reactors. According to Beaton and Maddox, "After a decade of development, it has become plain that reactors using heavy water have become one of the most promising lines for the industrial development of nuclear power." This research, they expect, "even in countries with an advanced nuclear technology...is likely to be of value."¹⁶ Not everyone is convinced of this value, however. Some engineers are concerned with the fact that, while Canada has spent \$300 million experimenting with heavy water reactors and plans to spend \$200 million more, all other countries have dropped this method and have gone on to other approaches.¹⁷

The pace of the Canadian atomic energy program has been somewhat less than frantic. The NRX reactor broke down in December 1952, and it was not back in operation until February 1954.¹⁸

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Consideration was given to the idea of building uranium diffusion plants, but the suggestion was rejected in 1951 "on economic grounds."¹⁹ While the director of reactor development section of the USAEC could say in 1949, "The Reactor of most advanced design and performance is in Canada,"²⁰ the same agency in 1961 listed the NRX as seventh in the West commercially.²¹

Evidences of a definite decline in enthusiasm and activity can be seen through an examination of the section of the annual reports of the AECB which summarizes progress over the last year. In reports of the late 1940s a typical phrase was, "the performance of the NRX...has surpassed the expectations of its designers"; by the mid-1950s more common was, "assistance to Canadian universities...was continued on a somewhat larger scale"; and in the 1960-61 report the section on progress was dropped altogether.

While development continues ("nuclear power demonstration" stations have been completed and an \$80 million nuclear power plant is under construction²²) and uranium production remains an important industry (it was fourth in gross dollar value of metal production in the mid-1950s²³), the nuclear program which costs Canada \$6 per year per wage earner²⁴ has given her a realistic vision of the expenses and frustrations that can accrue to nuclear development and perhaps a better insight than could be expected of a less experienced nation into the staggering difficulties involved in the independent manufacture of nuclear weapons.

PART 2. Diffusion through international cooperation:

Canada and the United States

The United States has never offered to sell, loan, or give to Canada any nuclear weapons that Canada could set off by herself. Indeed, under present United States law, such an offer would be impossible. Nevertheless, it is a feasible policy alternative for Canada to ask for such an arrangement, and this approach has been seriously suggested.

While he has since changed his mind,²⁵ the American defense writer, Melvin Conant, proposed in 1960 that "Canada could ask for assistance from the United States in acquiring a modest but invulnerable, mobile, nuclear deterrent capability such as will hopefully be found in the ... Polaris in return for a continuation of Canadian cooperation in making available to the United States its real estate and facilities for as long as these are useful"²⁶ A similar proposal was made in 1950 by General Guy Granville Simonds, a former chief of the General Staff of the Canadian Army,²⁷ and in 1959 by the prominent Canadian political economist and defense analyst, James Eayrs.²⁸

In fact, Prime Minister John Diefenbaker, at one stage in the complex debate over the acquisition of nuclear weapons, seemed almost to be exercising this policy alternative: "... if and when the Canadian government should decide to equip its forces with nuclear weapons, those weapons would be under Canadian control and would be used in Canada only as the result of a decision by the Canadian government."²⁹

Independence and weapons diffusion

One of the important incentives (or at least arguments) for the attainment of a nuclear force has been the feeling that possession of nuclear weapons will guarantee and embody independence for the smaller power from the core power. It has been argued by some that such a view is erroneous and that the British and French cases are demonstrating that, if anything, the opposite is true. 30

This incentive, whether an illusion or not, applies almost exclusively to the first type of diffusion -- diffusion by independent manufacture. Diffusion through international cooperation implies clearly and on its face an increase of dependence. It is true of course that one can imagine a situation in which one country gives or sells nuclear weapons to another without any strings being attached, but this is hardly likely to appear in reality. At the very least the donor power will seek to make sure that the weapons will not be used against itself. But, more than this, the donor will avoid getting involved in such a transaction unless it is able to assure itself that the weapons dispersal will further its own interest and that the weapons will be used only under certain conditions and at certain targets.

Claims of increased dependence are voiced even when conventional weapons are spread by international cooperation. British and American expressions of alarm at the USSR-India MIG deal were matched in intensity only by Khrushchev's cries of agony when India increased weapons purchases from the West during and after the Chinese border incursions.

This consideration is especially relevant with regard to Canada, where the American presence is already felt too much. Canadian anti-Americanism is a cultural pattern going back to the days of "manifest destiny" and "fifty-four forty or fight." It currently manifests itself, not in the rock-through-the-embassy-window violence found in some parts of the world, but rather in a carping, self-pitying, identity-seeking criticism of all things American, as well as in something of an inferiority complex. While it is by no means suggested that this attitude is entirely unjustifiable, much of the criticism particularly of defense matters, appears to be factually unsound and overly suspicious. ³¹ In the debate in Canada over the acquisition of US nuclear warheads, this rather uniquely traditional anti-Americanism has given added impetus to the fear of becoming "the world's most northerly banana republic,"--a fear which is evidence of a feeling of increased dependence which is very likely to occur when nuclear weapons are spread through international cooperation.

Other examples of this can be found in other parts of the world. A reason for opposition to the proposed NATO deterrent, which would primarily use US nuclear weapons, has been the fear of loss of individual independence. France is wary of the Nassau Pact partly for similar reasons. And an important incentive against the acquisition of nuclear weapons in Sweden and Switzerland has been the fear that such an arrangement would cause dependence on the donor and thus compromise traditional neutrality. ³² Finally, acquisition of nuclear weapons in India would conflict radically with the deeply-felt Indian desire for autarchy.

Joint defense

Canada's attitude toward atomic weapons and her disincentives toward becoming a nuclear power through international cooperation have been noisily brought out in the extended debate over the purchase of atomic warheads. First, however, some comments should be made about US-Canadian and US defense efforts during the Second World War and about the important Arrow affair.

The Permanent Joint Board of Defense which was set up in 1940 to coordinate Canadian and US defense efforts during the Second World War was continued in form and function, not without misgivings, after the war by an agreement on February 12, 1947. A number of additional measures have been taken jointly by the two countries, some through the PJBD, some outside it, which have increased this interdependence. In 1947 joint Arctic weather stations were set up; in 1948 the two nations agreed to a limited exchange of atomic information; in 1949 they joined NATO; since the early 1950s three radar warning lines have been cooperatively established; and now Canada has been drawn into the BMEWS warning system in which she performs a communications function. ³³

In May 1956, under a Liberal government, the Canadians began a study with the United States on how to improve the command and control structure of their forces. Under the very new Conservative administration, interim agreement was announced in August 1957 and was received with "calm indifference" in Parliament. ³⁴ Final agreement was reached in December, and with it the North American Air Defence Command came into existence.

NORAD, which has since become highly controversial in Canada, is a system of operational control of the air defense forces of the United States and Canada. With headquarters in Colorado, it is under the command of a United States officer. A Canadian serves as Deputy Commander and when the Commander is away (a situation which occurs rather frequently), the Canadian is in control. About 200,000 people (15,000 of them Canadians) are involved in NORAD's detection and defense system. The hardware consists of 400 radar units, 2,200 interceptors (75 US squadrons, 5 Canadian squadrons), the US Nike bases, and seven Bomarc bases (5 US, 2 Canadian).³⁵

The NORAD agreement is a Canadian admission that, as a liberal Canadian editor put it in 1957, "the first, essential interest of Canada in the world today is the security of the United States; that takes overwhelming priority over everything else in Canada's external relations."³⁶

But other Canadians voice misgivings:³⁷

Canada has, in fact if not in theory, ceased to be the equal partner in continental defense envisaged in 1938 and 1940. There is scarcely anything really cooperative about the defense of North America against a possible Russian attack. The weapons are American. The strategic decisions are American. Whether Canadians like it or not, their country is becoming, more and more, America's front line of defense, an expendable land-mass in the eyes of American strategists.

Where the Arrow fell

This feeling of national powerlessness and exasperation was intensified by the Arrow affair. The Arrow was a Canadian interceptor which, according to Beaton and Maddox, "would have reached full service by mid-1962 when it would probably have

held the world's absolute speed record and would undoubtedly have been the most effective weapon in the air defense of North America." ³⁸ It was hoped that the plane would be a vital contribution to continental defense and that "substantial numbers of this first-class aircraft would be purchased by the United States." ³⁹ By late 1958, however, the Conservative government was faced with delays and mounting costs in the program. The United States Air Force estimated at about the same time that the manned bomber, which is what the Arrow was designed to intercept, was soon to be obsolete. ⁴⁰

Prime Minister Diefenbaker decided, therefore, tentatively in September 1958 and finally in February 1959, to discontinue development of the aircraft and to replace it with the Bomarc anti-aircraft missile which was to be purchased from the United States. The decision came as a profound shock to the country, for the defense industry as well as much national self-respect had been keyed to the Arrow program. As the magazine, Canadian Aviation, noted, "There is hardly a plant which was not giving some portion of its production facility for participation in the Arrow program." ⁴¹ The effect of the shock proved to be long lasting: "Since that decision there has been a continuing turmoil of controversy over the merits of the aircraft, the long delay in reaching a decision at all, and the worse confusions that have compounded its effects." ⁴²

Among these "worse confusions" were two developments.

1) The Americans decided shortly after the Canadian Arrow decision that the Bomarc, always a controversial weapon, was

to be drastically cut. As a result of this seeming turnabout, which has recently been compared to the British Skybolt disappointment, "all Halifax broke loose in the Canadian parliament." ⁴³ At Canadian urging, the US agreed to continue a limited Bomarc program. 2) The Americans then expressed the opinion that their original estimates about the strategic longevity of the manned bomber had been wrong, that indeed the weapon could be expected to pose a threat for a good many more years, and that what Canada really needed was a few squadrons of some good interceptors. Since the Arrow development program had been discontinued and since its superb scientific and technical team had been dispersed (much of it to the US), Canada, it was suggested, should buy American interceptors.

"Needless to say," says Conant mildly, "There ensued charges of either bad faith or purblind judgement." ⁴⁴ And there ensued more than this from the Arrow affair. For Canada learned, as perhaps Britain is only now learning and France may have yet to learn, that she is woefully unable to keep up in the modern world of rapidly changing and exasperatingly uncertain weapons systems.

As James Eayrs pointed out at the time, the Canadian aircraft industry had been promoted by successive governments "as a cachet of economic maturity, a symbol of national greatness." But a great military aviation industry "has to do more than design and build a good war plane; it has to be able to take cancellations in its stride." For the Americans and the British, Eayrs felt, "scrapping an aircraft doesn't mean scrapping an industry. For us it does." ⁴⁵

One of the important and long lasting effects of the Arrow affair was the strengthening of a defeatist attitude in Canada-- a self-pitying feeling of having become militarily obsolete, a yearning for neutralism and isolationism. Many found it easy to agree with what an American defense writer noted in a prominent Canadian journal: the Arrow "was the only remaining Canadian contribution of significance to continental defense." With its cancellation and the ensuing Bomarc dispute, Canadians "witnessed the collapse of their own contribution to North American defense." 46

Thus it was that "Canada's National Magazine," the highly respected Maclean's, editorialized a month after the announcement of the Arrow decision: 47

We are a non-Power.../We should/ make an open announcement that Canada has discovered itself to be obsolete as a military nation, and intends therefore to strive for peace mainly as an economic and political nation. Honor our existing military commitments until they run out, but make it clear that our ultimate establishment will consist only of modest, modestly armed mobile units available for United Nations police duty.

The debate over warheads

The Arrow-Bomarc decision was one in a series in which Canada essentially became committed to a nuclear-supporting policy. In December 1957, the new Conservative government agreed in NATO to the policy of arming NATO forces with US-controlled tactical nuclear weapons. Since then, Canada has armed herself through NORAD and NATO with five carriers for nuclear weapons at a cost of \$685 million.

But at the same time there has been a rising tide of public opinion -- or at least journalistic opinion -- against the actual

purchase of nuclear weapons and warheads for these carriers.

Caught between the pressures of anti-nuclear opinion at home and nuclear commitment in its alliances, the government responded by indecision -- it refused to adopt a clear-cut nuclear policy, but it also refused to acquire the warheads.

As a result, the "nuclear posture" of Canada at the end
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of 1962 looked like this:

1) Two Bomarc bases built in Canada at a cost of \$100 million (\$14 million of it Canadian) were not equipped with nuclear warheads and hence were useless. In fact the RCAF crew at one base had gone off 24-hours alert and onto an 8-hour day because even if war were declared, it couldn't do anything. The government could have chosen the Bomarc "A" missile which can use either a nuclear or a conventional warhead, but instead chose the Bomarc "B" which is designed for nuclear use only.

2) Thirty-three Argus anti-submarine aircraft have been built by Canada at a cost of \$132 million. These are supplied with advanced equipment to spot submarines, but they would be unable to do any damage to the discovered submarine because they do not have the nuclear depth charges for which they were designed.

3) Five squadrons of the American Voodoo interceptor which were bought from the United States as a belated substitute for the Arrow were being used for home defense. The USAF Voodoos are equipped with optional nuclear missiles, but the Canadian ones use only conventional explosives.

4) Eight squadrons of a Canadian version of the Lockheed Starfighter interceptor were being phased into Canada's European NATO force. Built at a cost of \$431 million, these aircrafts under the 1957 NATO doctrine are to be used with either conventional or nuclear weapons, but they have not yet been supplied with nuclear weapons although US-controlled warheads are nearby.

5) Canada has bought six Honest John short-range unguided tactical nuclear missiles, four of which have been set up in Germany, conventionally armed and vulnerable.

Prime Minister Diefenbaker adopted a number of strategems to explain his procrastination. At various times over the past five years he apparently refused to make the nuclear leap because US procedures of joint control are inadequate, because such a move might cripple progress on disarmament, because competent carriers had not yet been introduced into Canada's NATO forces, and because there is no war on. The confusion was enriched by a division of feeling in the Cabinet. Minister of National Defense Douglas Harkness favored acquisition of nuclear warheads, while Minister of External Affairs Howard Green opposed such a policy.

This division pervaded the entire political arena, for, as Conant noted, "none of the Canadian parties has adopted a final position on defense policy." "It is un-Canadian," one Canadian has said, "to be unequivocal." The opposition Liberals, who designed all of Canada's defense commitments up until 1957, seemed at times to reject nuclear weapons point blank and at

other times to be more friendly toward the idea.⁵¹ The five-year dialogue between the two major parties has been accurately characterized by Beaton and Maddox as "a competition to avoid being the first to favor the adoption by Canada of nuclear weapons while also avoiding charges of feebleness towards the alliance."⁵² There were signs of a split in the Liberal Party too, for the shadow minister of defense and Liberal leader Lester Pearson⁵³ appeared at the end of 1962 to hold different views on the matter.

The views of the socialists in the New Democratic Party seemed to be more definitely anti-nuclear. The party urged a withdrawal from NORAD with some members favoring withdrawal from⁵⁴ NATO. In 1960 the Party demanded that Canada "make it clear that it cannot remain in the alliance if forces under NATO command should be provided with nuclear weapons."⁵⁵ (Thus a minor diffusion of nuclear weapons within an alliance can set in motion forces for the disintegration of the alliance.) Later policy (if any) appeared to be more mild, however, and the party has been criticized for recommendations in the realm of foreign affairs which are "either vague and non-committal or safe and feeble" with "no hint of an independent and socialist foreign⁵⁶ policy."

The position of the press too was often ambiguous. The newspapers which were party-oriented reflected, of course, the confusions of their parties. And the important national magazine, Maclean's, which consistently urged a neutralist policy since⁵⁷ 1959, continued to employ a defense writer who favors ac-⁵⁸ quisition of nuclear warheads.

Beyond the parties and journals there are groups in Canada actively opposing Canada's acquisition of nuclear weapons and in some cases urging a neutralist foreign policy. One of these groups, the Canadian Committee for the Control of Radiation Hazards, began in 1958 and lists many prominent Canadians among its membership. Another is the Combined Universities Committee for Nuclear Disarmament which organized in 1959 in direct response to the government's Bomarc announcement. It is affiliated with the British CND and claimed at the end of 1961 to have sold 4000 CND buttons (at 50¢ each) through chapters on 18 Canadian campuses. These groups have been actively engaged in such actions as pe-
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tition circulating and peace marching.

Public opinion on the issue was split, but it was far more favorable toward nuclear arms than the neutralist agitation would make it appear. According to a Canadian Institute of Public Opinion poll conducted late in 1962, 54% of the Canadians were in favor, 32% were opposed, 6% gave qualified answers, and only 8% had
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no opinion. Politically this majority was probably less determined than was the opposition. Thus a decision to accept nuclear weapons could be expected to lose the votes of those opposed without particularly gaining support from those in favor.

The political confusion was aggravated beyond belief by the elections of June 1962 in which the Conservatives, due largely to economic troubles which have grown in Canada since 1957, lost their majority. Since then they headed a shaky minority government which depended for its continuance on the confidence of the right wing Social Credit party. On at least one amazing occasion

During the 1960s and 1970s there was a strong movement
towards a more active role for the government in the economy and
in social services. This was reflected in the creation of the
Ministry of Social Services in 1967 and the Ministry of Health
in 1977. The government also introduced a number of social
programs, including the Canada Pension Plan (CPP) and the
Old Age Security (OAS) program. These programs were designed
to provide financial support to the elderly and to help
families with children. The government also introduced a
number of social programs for the disabled, including the
Canada Disability Tax Credit and the Canada Child Tax Credit.
The government's social programs have been a major part of
its social policy. They have helped to reduce poverty and
to improve the lives of many Canadians. The government's
social programs have also been a source of controversy. Some
people believe that the government is spending too much money
on social programs. They believe that the government should
focus on economic growth and on reducing the size of the
government. Other people believe that the government's social
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for the needs of all Canadians.

the Social Creditors managed to trick themselves into voting against the Conservatives and the government was saved only through⁶¹ the last minute support of the New Democrats.

Finally, in January 1963, things began to get specific. Early in the month, retiring NATO chief, General Lauris Norstad, at a press conference in Ottawa, apparently unaware of the touchiness of the question in Canada, admitted under intense questioning that Canada had committed its forces in Europe under NATO command to acceptance of nuclear warheads. Taken aback at the acute interest in the subject, Norstad stated at one point, "I am not sure what I am getting into here." What he had done was to give "the first authoritative definition of the role to be played in NATO by Canadian forces."⁶² His statement set off a whole series of political repercussions. By January 12, Pearson had decided to take the Initiative and in a speech demanded that the government end its "evasion of responsibility" and accept the nuclear arms.⁶³

Diefenbaker responded by offering yet another excuse for procrastination: the Nassau agreement of December 1962 presaged a change in NATO policy, he said, and thus it would be unwise for Canada to decide finally until after the May 1963 NATO meeting. Noting that Pearson had recently visited the United States, the Prime Minister suggested that the opposition leader's view had not been "made in Canada".⁶⁴ In the debate, Diefenbaker disclosed that Canada and the United States had been engaged in secret negotiations on the subject and in the process he gave out information which the American State Department felt to be erroneous. Accordingly the agency on January 30 issued a note

of 474 words which managed, in sonorous diplomatic tones, to call Diefenbaker an incompetent, a welsher on commitments, a breaker⁶⁵ of promises, and a liar.

Diefenbaker was joined by representatives of all parties in voicing indignation at what was seen to be unwarranted interference in Canadian affairs. But the question had been clearly put, and the government, which had been precariously facing a series of votes of confidence on economic measures anyway, crumbled. On February 4, in response to the Prime Minister's continued hedging Defense Minister Harkness resigned; on February 5, a no confidence motion passed 142 to 111; on February 9 two more ministers resigned; and on the same day the influential conservative Toronto Globe and Mail editorially urged Diefenbaker to resign from leadership of the party.

There followed one of the most bitter election campaigns in Canadian history. The Liberals promised to honor Canada's nuclear "commitments;" but pledged that they would attempt to renegotiate the country into a non-nuclear position as soon as possible. The Conservatives, badly split under Diefenbaker's leadership, promised to continue things the way they were. The New Democratic Party adopted a clearly anti-nuclear position which was tinged with neutralism. The French wing of the Social Credit party was also anti-nuclear, but for different reasons, and the English faction tended to go along with this position.

Other issues were raised, but the nuclear issue dominated the campaign until by the middle of March, the Vancouver Sun

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was complaining:

By now every nuclear hair has been split, every nook and cranny explored, every possibility exhausted.... Most voters must by now be thoroughly tired of the nuclear theme song and long to hear an intelligent speech about remedies for the country's other problems.

As in other campaigns, anti-Americanism formed an important part of Diefenbaker's approach (although he called it being "pro-Canada.") He was given help in this from an unexpected source. In testimony released during the campaign, Secretary of Defense Robert S. McNamara, in what James Reston called "a fit of absent-mindedness," stated about the Bomarc missiles, "At the very least, they would cause the Soviet to target missiles against them and thereby increase their missile requirement or draw missiles on to these Bomarc targets that would otherwise be available for other targets." ⁶⁷ This showed, said Diefenbaker ignoring the fact that most Bomarcs are on US soil, that Canada is just serving as a decoy to draw fire.

In the election of April 8, the Conservatives were defeated and the Liberals attained a near majority. With the reasonable expectation of some abstention in the other parties on the nuclear issue, Pearson is likely to be able to put across his limited nuclear program. Given the circumstances and the atmosphere in which this program would be carried out, it appears highly unlikely, contrary to what Beaton and Maddox have predicted, that such a policy would lead to a desire for a national nuclear force. 58

In 1956, the Canadian foreign affairs analyst, Edgar McInnis, ⁶⁹ had noted that:

...there exists in Canada a broad area of agreement which is satisfied with the general policy that has been pursued by the government and is only mildly critical on a few secondary details. No issue has arisen since the war to destroy this general consensus /sic./ or to provoke a national controversy over fundamental issues.

Revision of this opinion would appear now to be in order.

PART 3. The Canadian case and its implications

In 1962, the British defense analyst, F. W. Mulley, wrote, "All the arguments which led Britain to decide to develop her own independent nuclear weapons are equally valid from the French point of view for France herself, and there is no reason why other members of NATO should not decide to follow suit."⁷⁰

The Canadian case, however, demonstrates that there are reasons for not following suit. For Canada's nuclear experience shows, despite an obvious ability to produce nuclear weapons, a general refusal to develop weapons independently even to the option point and a great reluctance to acquire even tactical joint-controlled nuclear weapons through international cooperation. The "disincentives" for development of a nuclear capability in Canada, have, for the most part, been rendered explicit in the debate over nuclear weapons. These disincentives will be considered here under four headings chosen for their analytical neatness, not for their logical necessity. The disincentives can be grouped as economic, military, international, political, and psychological.

Economic disincentives

Canadians are better informed than the people of any other non-nuclear nation about the costs of a nuclear weapons program. They have developed a sophisticated peaceful atomic energy program and have found far less satisfaction in it than they originally hoped and they are fully aware of the disappointments and unexpected costs that invariably ensue. Furthermore, the Arrow affair demonstrated all too dramatically the exasperations involved in

competing in modern delivery systems. Finally, Canada is closely associated with the United Kingdom in temperament and tradition and has been in a better position than most to understand and sympathize with the disappointments and soul-searchings involved in the British quest for an independent deterrent.

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As Beaton and Maddox note, an argument for nuclear weapons often voiced by the British was the assertion that nuclear weapons will provide a cheaper defense and will be useful to an advanced economy. This argument has never been heard in Canada for the Canadians have seen and experienced the economic realities of a nuclear weapons program.

Military disincentives

The usual military or strategic cautions apply also to Canada: nuclear arms would make the country a prime target; they would be a danger because of possible accidents; and they might be provocative to the USSR. Though they apply less well, these arguments have been used against the acquisition of nuclear warheads for defensive NORAD weapons. As one writer puts it, "if nuclear war does start, all the nuclear nations will be obliged to devour one another. The atomic club is a suicide club."⁷²

Or, as another says, "If our neighbor to the south has a quarrel with Russia that is their [sic.] affair not ours."⁷³ The Soviets are aware of this attitude. Some of their rocket-rattling has been directed at Canada and it has had its effect.⁷⁴

Secondly, as her delayed reaction in the Cuban crisis of October 1962 indicates, Canada feels herself to be in no direct

or immediate danger. The country is not part of a China-India or Arab-Israeli type of confrontation in which fears mount that the enemy will attain nuclear arms. Canada is involved of course in an alliance aimed at a perceived Soviet threat, but the threat is general and is posed for the entire alliance, not just for Canada. In this, however, Canada is no different from Britain and France.

Thirdly, Canada has no reason to feel a decline of United States credibility. The British and especially the French have used such a perceived decline as an excuse in their struggles for independent nuclear forces. "Canadian soil," a former Canadian foreign ministry official has said, "is so important to the defense of the United States that we have not been inclined to worry about its losing interest in our fate." ⁷⁵ This disincentive, which is a direct result of geography, is the most unique of any to the Canadian case. However, the validity of the Europeans' oft-expressed fear of decline of US credibility, accompanied as it is by no evidence of a fear of danger, has ⁷⁶ been seriously questioned.

Fourthly, Canada is engaged in no colonial or foreign adventures by herself. Thus, unlike France and Britain, she has never been able to imagine a use for an independent nuclear force in areas in which the United States was not directly involved.

Finally, Canada's military tradition is a restraining influence. As part of the middle power self-image, she has no memories of military grandeur and no zeal for expansion. Indeed, a Canadian military history volume is subtitled, "The Military History of an Unmilitary People".⁷⁷ And the word, "conscription", as many politicians found twenty years ago, is a certain vote loser. As one result of this, the military in Canada, which presumably would be most amenable to a nuclear weapons program, is weaker as a political influence than is its counterpart in many other countries. Historically, Canada's military forces have played essentially a late-arriving, secondary role in the major wars and the RCAF, as Beaton and Maddox note, has never been engaged by itself in strategic bombing.⁷⁸

International political disincentives

It is clear that Canada sees her restrained, non-nuclear posture as a source of prestige and influence in world councils.⁷⁹ The opposite is true for Britain and France who still harbor some visions of great power and grandeur. But Canadians seem to feel "that the advantages of an atomic arsenal would be offset by the hostility its possession could be expected to arouse in a world public opinion still disposed to place nuclear weapons and their owners in a special category of iniquity."⁸⁰ Canada especially values her influence, real or imagined, over the emerging nations, particularly those in the Commonwealth. Furthermore, through her seat on the UNAEC and in NATO, "it became possible to influence nuclear strategy without ... acquiring

atomic weapons." ⁸¹ Taking France as a norm, it is often casually assumed that all countries, when they are able, will seek a nuclear capability as an international status or virility symbol. But the prestige that Canada finds in a non-nuclear status may prove to be a more typical emotion.

The reason most often given by those opposed to Canada's acquisition of nuclear warheads is that such an action will encourage the spread of nuclear weapons and will adversely affect progress on disarmament. As Maclean's editorialized, "refusal is the only way to limit membership in the 'nuclear club' effectively, and the only effective protest against the acceptance of nuclear war as a tolerable consequence of national policy." ⁸² Or, as an analytically-minded member of the Canadian branch of the Committee for Nuclear Disarmament put it, if Canada accepts nuclear weapons, "Russia would be able to respond by giving them to her more reliable allies." ⁸³

The idea that Canada has a special and significant mission to perform in limiting nuclear diffusion and in disarmament is an excepted component of the political lore of the nation. This was clearly argued even in the statement of Diefenbaker when he first proposed the acquisition of nuclear weapons: "Believing that the spread of nuclear weapons at the independent disposal of individual nations should be limited, we consider that it is expedient that ownership and custody of the nuclear warheads should remain with the United States." ⁸⁴ Since that time, the Prime Minister has several times expressed a fear of encouraging the spread of nuclear weapons and of hampering

disarmament progress as reasons for procrastination on a final warheads decision.⁸⁵ And, it is often proposed in Canada that the country initiate a "self-denying ordinance" in the United Nations to help limit nuclear diffusion.⁸⁶ A nation with this kind of an attitude does not make a likely prospect for the nuclear club.

Psychological disincentives

As had been noted, there is a rather clear loss of independence involved when nuclear weapons are diffused through international cooperation. Canadians, with their distinct brand of anti-Americanism, have been especially wary of obtaining even minor nuclear weapons from their dominating southern neighbor. Highly vocal protest is certain if ever consideration is made of acceptance of independent strategic weapons.

Secondly, Canada's middle power complex, as mentioned above, is a most potent psychological barrier to acquisition of nuclear weapons. The image of herself as an influential, but not militarily powerful, actor on the world scene has great appeal and is widely accepted. An independent nuclear capability (and for many Canadians, a dependent one) does not fit into this image at all.

Insofar as inertia is a psychological force, it serves to keep Canada non-nuclear. After 17 years of "nuclear restraint," Canadians have gotten rather used to the idea. The policy has "worked" for this long, it can be argued, why change now?

Finally, "morality" has proved to be very important in the discussions on nuclear weapons. To begin with, many Canadians,

after careful objective analysis, find their country to be morally superior to their gigantic neighbor. This view is caricatured by a Canadian political scientist: "Having studied thousands of Canadian editorials, and listened to as many speeches and conversations, I have come to the conclusion that the fault with North America is an improper division of resources: the Americans got the power; the Canadians the virtue and common sense." 87

Added to this (and perhaps part of it), a moral value has been found in being a non-nuclear power. Nuclear weapons are seen as contaminating, as "intrinsically abhorrent and diabolical," 88 and the possessor is seen as being committed to a policy of mass devastation. Far more appealing, therefore, is a sort of unarmed neutrality: "Why," one misinformed Canadian asks, "cannot Canada become the modern Switzerland--a place of refuge not defense?" 89 Canada, the editors of Maclean's feel, must protest against this immoral weapon by refusing nuclear warheads: "It is the only thing a small nation can do to express its horror of nuclear war, and to make the great powers pause." 90

At least one person, in an argument that was later used in the 1963 campaign, has found the moral position of Canada on nuclear weapons somewhat shaky. The nation, he notes, has been supplying fissionable material for weapons purposes since 1944: 91

Why should she have qualms now? Her position may be compared to that of the dope peddler who is on the verge of becoming an addict. It is of some significance that the dope peddler is generally deplored more than the addict.

A Canadian journalist has called Canada's defense position one of "nuclear virginity".⁹² But in this case, virginity is more than a state of being; it is also a complex.

The Canadian case

Canadians like to boast that their country, despite its small size has greatly disproportionate influence in the affairs of the United States, the alliance, the emerging nations, the UN, and the world. To an extent, of course, this is true. The Canadian foreign service is one of the finest in the world and Canada's record in international affairs, particularly after the war under the leadership of Lester Pearson, has impressed many international leaders as well as the Nobel Peace Prize committee.⁹³ Much of the boast, however, is unrealistic bluster. As Edgar McInnis has soberly observed of Canada's highly-touted influence as a moderator, "The frequently repeated claim that Canada serves as a bridge or an interpreter, while it may be justified on some special occasions, is more often a myth that is cherished for the sake of self-esteem."⁹⁴

As a non-nuclear influence, Canada's impact, despite the protestations of the anti-warhead people, seems to have been even more modest. James Eayrs flatly insists that her example "will do little or nothing to prevent the spread of atomic weapons throughout the states-system."⁹⁵ And Beaton and Maddox note that, "even the advocates of a non-nuclear club in Britain and elsewhere have seldom noticed that the club already has a member."⁹⁶ The usually well informed British Laborite, Denis Healey, for example, proclaimed in 1960 that, "So far no country

has resisted the temptation to make its own atomic weapons once it has acquired the physical ability to do so." 97

But while Canada may not really be much of an influence, there are many disincentives in the Canadian case which are likely to have relevance elsewhere. Thus Canada may not be influential, but she will in many respects prove to be typical.

The National Planning Association's pamphlet, The Nth Country and Arms Control, published in 1960, contains ratings of countries as potential nuclear powers. 98 Those listed in Group I are "able to embark on a successful nuclear weapons program in the near future"; those in Group II are "economically capable, fairly competent technically, although perhaps somewhat more limited in scientific manpower than the countries in Group I"; those in Group III are "probably economically capable, although more limited in industrial resources and scientific manpower" and would probably be unable to achieve "a successful nuclear weapons program within five years." Canada, of course, is listed in Group I. While these standards tend generally to make the achievement of a successful program seem much easier than it has proved to be, the lists do provide a convenient relative ranking of most of those countries which are in any meaningful sense potential nuclear powers. 99

Most of the Canadian disincentives apply also to most of the non-Communist countries on these lists. Canada is rather peculiar in only two respects. First, she is uniquely well informed on the economic problems involved in an atomic weapon program. But this disincentive is most easily communicated

and most easily duplicated. Moral attitudes and military traditions, for example, can not be readily transmitted, but economic experiences can. Thus although reactor technology, as it becomes more widespread, serves to make a nation better prepared to attempt a nuclear weapons program, it also inevitably infuses a more realistic attitude toward the costs and agonies involved in producing even a minimal capacity. Furthermore the economic trauma experienced by the British and soon presumably the French is likely to be more widely and more generally understood.

Secondly, Canada because of its geography is not likely to feel a decline in United States credibility. The British and especially the French complain often about such feelings, but since some of the other alliance members who are not planning atomic weapons programs do not seem to have the same feelings, one is inclined to dismiss such expressions as excuses, not reasons. Nevertheless, other alliance partners, should they decide on a nuclear program could use the same excuse with approximately equal validity; Canada could not. This whole consideration, of course, applies almost exclusively to those potential nuclear nations which belong to the US alliance system. The problem of American credibility does not apply, at least not directly, to the advanced neutral nations.

With these qualifications made, it seems clear that the Canadian case applies rather well to several of the lesser powers in NATO. Here too, one finds militarily unpretentious powers with middle power complexes, moral objections to nuclear weapons, a non-nuclear inertia, genuine fears of encouraging

nuclear diffusion, and better ideas of what to do with their money. Most similar perhaps, is Norway (Group III) which, M. Spaak has asserted, has at times combined with Canada to form a quasi-neutralist "Oslo-Ottawa" axis within NATO.¹⁰⁰ And Denmark (Group II), like Norway, has adopted a nuclear weapons policy within NATO which is similar to, but more definite than, Canada's.¹⁰¹ The position of the Netherlands (Group II) and Belgium (Group I), while not so vocally anti-nuclear, is similar. And Italy (Group I), with a military tradition which is certainly not comparable to Canada's, will probably remain content as a middle power and will continue to take on the psychological, political, military, and economic attitudes which appear to be part of that status.

The European neutrals pose a different problem. Sweden (Group I) and Switzerland (Group I) have a military tradition of armed neutrality which, some feel, would be enhanced by the incorporation into their forces of nuclear weapons. But the moral objection is strong in these countries, particularly in the social democratic parties. Furthermore, like Canada, they find their non-nuclear status to be a source of international prestige. And they too, dislike the idea of being put on a target list, of encouraging the diffusion of nuclear weapons by example, and of breaking their non-nuclear habit. Although they are not as well informed as Canada on the economic problems, they learn and are learning quickly. Finally, as noted above, their extreme desire for independence will be an indirect disincentive since it will dissuade them from accepting

nuclear weapons through the more economical method of international cooperation. 102

Most of this can also be said for the unarmed neutrals, Austria (Group I) and Finland (Group II). And in addition, in these cases of course, the problem of military provocation and vulnerability is particularly severe.

Not unexpectedly, the Canadian case has a great deal of relevance to Australia (Group II) and New Zealand (not listed). All the Canadian disincentives apply, except that, should China develop a nuclear arsenal, these countries (particularly Australia) might feel, despite ANZUS, a great enough danger to begin their own weapons development. But as in Canada there are many people there who would violently oppose such a move with arguments which are familiar from the Canadian experience. 103 And, of course, a greater and more credible US effort in that area in the event of a Chinese nuclear threat might well discourage a nuclear effort.

The Chinese situation has an even more direct effect on India (Group I) and on Japan (Group I). Should the Chinese attain a nuclear capability, India with greatest reluctance may be compelled to follow suit. In the Indian case, however, one can find probably the most extreme example of some of the Canadian disincentives: the moral objection, the fear of increased dependence, the fear of encouraging nuclear diffusion, the non-nuclear habit, the feeling of self-respecting prestige that comes with non-nuclear status, and the middle power "influencing" complex. 104 Japan is her only rival in the moral abhorrence of nuclear weapons. While an immediate nuclear threat may be enough to overcome these

While an immediate nuclear threat may be enough to overcome these disincentives, it is also possible that the disincentives might be enough to channel the reaction to the threat into non-nuclear patterns: alliance, use of the UN, or even capitulation. And if the Chinese develop a capability, but do not use it directly as a threat, the disincentives in these countries may encourage accomodation rather than the independent development of nuclear weapons.

These then are some of the inferences that can be drawn from the Canadian case. As a direct influence, Canada's effect on nuclear diffusion may be minimal. But as the first self-restrained non-nuclear power, her experience may well prove to have widest relevance.

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21. Newman, op.cit., (note 17), p. 48.

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24. Newman, op. cit. (note 17), p. 48.

25. Melvin Conant, The Long Polar Watch: Canada and the Defense of North America (N.Y.: Harper for the Council on Foreign Relations, 1962), p. 134.

26. Melvin Conant, "Canada and Continental Defense: An American View," 15 International Journal 227 (Summer 1960).

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28. James Eayrs, "Canada, NATO, And the Nth Power Problem," 39 Canadian Forum 6-7 (April 1959).

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30. See Beaton and Maddox, op. cit. (note 1), Chapter 12.

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33. This history is summarized adequately in Conant, op. cit. (note 25), especially in chapter 2.
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63. Winnipeg Free Press, January 12, 1963, p. 1. Los Angeles Times, January 13, 1963, p. A.

64. Winnipeg Free Press, January 26, 1963, p. 1.
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89. Letter to the editor, Maclean's Magazine, April 25, 1959, p. 4.
90. November 19, 1960, p. 4.
91. J. W. Hilborn, quoted in Conant, op. cit. (note 25), p. 97.
92. Newman, op. cit. (note 48), p. 2.
93. See Hugh L. Keenleyside, et. al., The Growth of Canadian Policies in External Affairs (Durham, N.C.: Duke University Press, 1960), particularly the introduction by Mr. Keenleyside.
94. Quoted in Eayrs, op. cit. (note 80), p. 3.
95. Op. cit. (note 28), p. 6.
96. Op. cit. (note 1), p. 108.
97. The Race Against the H Bomb (Fabian Tract 322, March 1960). Quoted in Beaton and Maddox, op. cit. (note 1), p. 98.
98. (Washington, D.C.), pp. 27-28. The technical report is by William C. Davidon, Marvin Kalkstein, and Christoph Hohenemser.
99. Israel is neglected by the list makers.

100. Beaton and Maddox, op. cit. (note 1), p. 103.
101. See Niels Norlund, "The Danes' Dilemma," The Reporter, March 2, 1961, pp. 28-30.
102. See Beaton and Maddox, op. cit. (note 1), chapters 9 and 10.
103. Christian Science Monitor (Western Edition), October 30, 1962, p. 4; Economist, May 25, 1963, p. 764.
104. See Beaton and Maddox, op. cit. (note 1), chapter 8.

- 1. The first section of the report is devoted to a general survey of the situation in the country.
- 2. The second section contains a detailed account of the work done during the year.
- 3. The third section is a summary of the results of the work.
- 4. The fourth section is a list of the names of the persons who have taken part in the work.
- 5. The fifth section is a list of the names of the persons who have been appointed to the various committees.
- 6. The sixth section is a list of the names of the persons who have been appointed to the various committees.
- 7. The seventh section is a list of the names of the persons who have been appointed to the various committees.
- 8. The eighth section is a list of the names of the persons who have been appointed to the various committees.
- 9. The ninth section is a list of the names of the persons who have been appointed to the various committees.
- 10. The tenth section is a list of the names of the persons who have been appointed to the various committees.

